IFW



PATENT Customer No. 22,852 Attorney Docket No. 04958-0008-08000

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Casterman et al.	)
Application No.: 10/751,826	) Group Art Unit: 1645
Filed: January 5, 2004	) Examiner: not yet assigned
For: IMMUNOGLOGULINS DEVOID OF LIGHT CHAINS	)

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

#### INFORMATION DISCLOSURE STATEMENT UNDER 37 C.F.R. § 1.97(b)

Pursuant to 37 C.F.R. §§ 1.56 and 1.97(b), applicant brings to the attention of the Examiner the documents listed on the attached PTO 1449. This Information Disclosure Statement is being filed before the mailing date of a first Office Action on the merits for the above-referenced application.

Some of the listed documents were previously submitted in prior applications, Serial No. 09/293,769, filing date April 19, 1999; Serial No. 08/471,282, filing date June 6, 1995; and Serial No. 08/106,944, filing date August 17, 1993, upon which applicants rely for the benefits provided in 35 U.S.C. § 120. Therefore copies of these documents are not provided. Copies of other listed documents are provided with this Information Disclosure Statement for the convenience of the Examiner.

Applicant respectfully requests that the Examiner consider all the listed

documents and indicate that they were considered by making appropriate notations on

the attached form.

This submission does not represent that a search has been made or that no

better art exists and does not constitute an admission that each or all of the listed

documents are material or constitute "prior art." If the Examiner applies any of the

documents as prior art against any claim in the application and applicants determines

that the cited documents do not constitute "prior art" under United States law, applicant

reserves the right to present to the office the relevant facts and law regarding the

appropriate status of such documents.

Applicants further reserve the right to take appropriate action to establish the

patentability of the disclosed invention over the listed documents, should one or more of

the documents be applied against the claims of the present application.

If there is any fee due in connection with the filing of this Statement, please

charge the fee to our Deposit Account No. 06-0916.

Respectfully submitted.

FINNEGAN, HENDERSON, FARABOW,

GARRETT & DUNNER, L.L.P.

Dated: July 1, 2004

Reg. No. 34,872

-2-

# **INFORMATION DISCLOSURE CITATION**

Atty. Docket No.	04958-0008-08000	Appln. No.	10/751,826
Applicant	Casterman et al.		
Filing Date	January 5, 2004	Group:	Not yet assigned

 OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)
 Burton, "Human and mouse monoclonal antibodies by repertoire cloning," <i>TIBTECH</i> , 9: 169-175 (1991)
Dunnick et al., "An immunoglobin deletion mutant with implications for the heavy-chain switch and RNA splicing," <i>Nature</i> , 286: 669-675 (1980)
Eilat et al., "Secretion of a soluble chimeric γδ T-cell receptor-immunoglobulin heterodimer," <i>Proc. Natl. Acad. Sci. USA</i> , 89: 6871-6875 (1992)
Fanger et al., "Bispecific Antibodies," Critical Reviews in Immunology, 12(3,4):101-124 (1992)
Froyen et al., "Bacterial Expression of a Single-Chain Antibody Fragment (SCFV) That Neutralizes the Biological Activity of Human Interferon- <i>y</i> ," <i>Molecular Immunology</i> , 30(9): 805-812 (1993)
Gorman et al., "Humanisation of Monoclonal antibodies for therapy," Immunology, 2: 457-466 (1990)
Hamers-Casterman et al., "Naturally occurring antibodies devoid of light chains," <i>Nature</i> , 363: 446-448 (1993)
 Harlow et al., "Bacterial Cell Wall Proteins That Bind Antibodies," in <i>Antibodies A Laboratory Manual</i> , Cold Spring Harbor Laboratory, pp. 615-623 (1988)
Hendershot et al., "Assembly and Secretion of Heavy Chains that Do Not Associate Posttranslationally with Immunogloblin Heavy Chain-binding Protein," <i>The Journal of Cell Biology</i> , 104: 761-767 (1987)
Köhler et al., "Continuous cultures of fused cells secreting antibody of predefined specificity," <i>Nature</i> , 256: 495-497 (1975)
Lehninger, "The Amino Acid Building Blocks of Proteins," in <i>Biochemistry</i> , 2d Ed., The Molecular Basis of Cell Structure and Function, Worth Publishers, Inc., pp. 71-74 (1970)
 Lerner et al, "At the Crossroads of Chemistry and Immunology: Catalytic Antibodies," <i>Science</i> , 252: 659-667 (1991)
Lipscombe et al., "Intranasal immunization using the B subunit of the Escherichia coli heat-labile toxin fused to an epitope of the Bordetella pertussis P.69 antigen," Molecular Microbiology, 5(6): 1385-1392 (1991)
McCaffarty et al., "Phage antibodies: filamentous phage displaying antibody variable domains," Nature, 348: 552-554 (1990)
Nuttall et al., "A naturally occurring NAR variable domain binds the Kgp protease from Porphyromonas gingivalis," CSIRO Health Sciences and Nutrition and CRC for Diagnostics, Australia
Plückthun, "Antibodies from Escherichia coli," Nature, 347: 497-498 (1990)
Prelli et al., "Franklin's Disease: Igy <sub>2</sub> H Chain Mutant Bur," <i>The Journal of Immunology</i> , 14B(3): 949-952 (1992)
Radbruch et al., "Control of Immunoglobulin Class Switch Recombination," <i>Immunological Reviews</i> , 89: 69-83 (1986)

### **INFORMATION DISCLOSURE CITATION**

Atty. Docket No.	04958-0008-08000	Appln. No.	10/751,826
Applicant	Casterman et al.		
Filing Date	January 5, 2004	Group:	Not yet assigned

 OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)
Roitt et al., "Antibody Structure and Function," in <i>Immunology</i> , Gower Medical Publishing, London, pp. 5.1-5.9 (1985)
Roitt et al., "Molecules which Recognize Antigen," in <i>Immunology</i> , Gower Medical Publishing, London, pp. 5.1-5.11 (1989)
Roux et al., "Structural analysis of the nurse shark (new) antigen receptor (NAR): Molecular convergence of NAR and unusual mammalian immunoglobulins," <i>Proc. Natl. Acad. Sci. USA</i> , 95: 11804-11809 (1998)
Shen et al., "Deletion of the Linker Connecting the Catalytic and Cellulose-binding Domains of Endoglucanase A (CenA) of Cellulomonas fimi Alters Its Conformation and Catalytic Activity," The Journal of Biological Chemistry, 266(17): 11335-11340 (1991)
Sitia et al., "Developmental Regulation of IgM Secretion: The Role of the Carboxy-Terminal Cysteine," Cell, 60: 781-790 (1990)
Songa et al., "A Card Agglutination Test (CATT) for Veterinary Use Based on an Early VAT RoTat 1/2 of Trypanosoma Evansi," Ann. Soc. belge Mèd. trop., 68: 233-240 (1988)
Unger-Waron et al., "Dromedary IgG: Purification, Characterization and Quantitation in Sera of Dams and Newborns," Isr. J. Vet. Med., 43(3): 198-203 (1987)
 Ward et al., "Binding activities of a repertoire of single immunoglobulin variable domains secreted from Escherichia coli," Nature, 341: 544-546 (1989)

Examiner		Date Considered .
*Examiner:	Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	
Form PTO 1449 Patent an		Patent and Trademark Office - U.S. Department of Commerce



# INFORMATION DISCLOSURE CITATION

ALEXTRACENET No.	04958-0008-08000	Appln. No.	10/751,826	
Applicant	Casterman et al.			
Filing Date	January 5, 2004	Group:	Not yet assigned	

			U.S. PATEN	T DOCUMENTS			
US 2003/0130496 A1 07/10/2003 Winter et al. 536 23.53	·		Issue Date	Name	Class		Filing Date If Appropriate
		US 2003/0114659 A1	06/19/2003	Winter et al.	536	23.5	
US 2004/0110941 A2 06/10/2004 Winter et al. 536 23.53		US 2003/0130496 A1	07/10/2003	Winter et al.	536	23.53	
		US 2004/0110941 A2	06/10/2004	Winter et al.	536	23.53	

		FOREIGN PATI	ENT DOCUMENT	S		
	Document Number	Publication Date	Country	Class	Sub Class	Translation Yes or No
ıs	EP 0 239 400	09/30/1987	Europe			
 1.	EP 0 368 684 B1	05/16/1990	Europe			
9	WO 88/01649	03/10/1988	PCT			
 1	WO 88/06630	09/07/1988	PCT			
 ۸.	WO 90/05144	05/17/1990	PCT			
	WO 92/01047	01/23/1992	PCT			
T	WO 92/01787	02/06/1992	PCT			
1	WO 03/002609 A2	01/09/2003	PCT			
				1		

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)
Adetugbo et al., "Molecular analysis of spontaneous somatic mutants," Nature, 265: 299-304 (1977)
Bernstein et al., "A new high molecular weight immunoglobulin class from the carcharhine shark: Implications for the properties of the primordial immunoglobulin," <i>Proc. Natl. Acad. Sci. USA</i> , 93: 3289-3293 (1996)
Blier et al., "A Limited Number of B Cell Lineages Generates The Heterogeneity Of A Secondary Immune Response," <i>J. Immunology</i> , 139(12): 3996-4006 (1987)
Brandt et al., "Loss of Consensus Splice Signal in a Mutant Immunoglobin Gene Eliminates the CH <sub>1</sub> Domain Exon from the mRNA," <i>Molecular and Cellular Biology</i> , pp. 1270-1277 (1984)